

SHORT COMMUNICATIONS

Observations of *Bombus terrestris* (L.) (Hymenoptera: Apidae) feeding on honeydew—The foraging of bumblebees for nectar and pollen from flowers is well documented (Alford, 1975; Betts *et al.*, 1986; Prÿs-Jones & Corbet, 1987) particularly in relation to foraging strategies (Prÿs-Jones & Corbet, 1987). The foraging of bumblebees is not restricted to flowers but has been reported from extra-floral nectaries on certain plants such as the field bean and the sunflower (Alford, 1975). Bumblebees have also very occasionally been observed visiting aphids and some other plant-sucking insects; this was particularly notable for the species *Bombus lucorum* (L.) and *Bombus terrestris* (L.) (Alford, 1975; Free & Butler, 1959). The following observations detail an occurrence of aphid honeydew foraging.

On the 16.vi.1991 in the Tonbridge area of Kent, several individuals of *Bombus terrestris* were observed patrolling the leaves of a beech tree (*Fagus sylvatica* L.). Each bumblebee was observed until it passed out of sight. A total of eight individuals active around the beech tree were observed in detail. The behaviour of the bumblebees was consistent between individuals. The following is a description of the typical behaviour of the foraging bumblebees.

The beech tree was approached rapidly and purposefully by the bumblebees. Nearing the tree they slowed and hovered around patches of leaves. This hovering would centre on anything from a couple of leaves to as many as several dozen. Close examination revealed the majority of these leaves to be curled and distorted in the manner typical of aphid damage. A fair proportion of these leaves were infested with aphids. Particular leaves were targeted by the bumblebees and they were investigated more closely by the bee.

The close investigation took the form of a slower hovering flight around the leaf during which the antennae brushed the air close to the leaf surface. A few seconds later the bee would land on the underside of the leaf and touch the leaf surface with its antennae. After this it was usual for the bee to extend its proboscis and feed off the leaf surface. The period of feeding varied from less than 10 seconds to in excess of 1 minute. The leaf patches fed on always possessed honeydew and frequently had resident aphids. The extent of honeydew being taken directly from the aphids was doubtful but feeding took place within millimetres of individual aphids on several occasions. The bumblebees appeared to spend more time feeding on the leaves that held active colonies of aphids.

Deserting the leaf of feeding the bees would hover slowly, carefully inspecting the surrounding leaves. This search of narrow radius would continue until an adjacent leaf was landed on or the bee lost interest. The bumblebees' interest would, however, not be totally lost as they would resume a rapid searching flight close to the tree, frequently closing in on patches of leaves and repeating the detailed searching behaviour and occasionally to resume feeding on honeydew. The bumblebees would always leave the tree with the same rapid flight with which they approached. The beech tree, about 5 metres tall, regularly had several *B. terrestris* patrolling simultaneously.—Clive Turner, 19 Pew Tor Close, Tavistock, Devon PL19 8QJ.

REFERENCES

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 Free, J. B. & Butler, C. G. 1959. *Bumblebees*. Collins, London.
 Prÿs-Jones, O. E. & Corbet, S. A. 1987. *Bumblebees*. Naturalists' Handbooks 6. Cambridge University Press.